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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,666	02/18/2004	Thomas E. McEwan	MCEWAN.0058P	5208
7590 08/11/2004				
Weide & Miller, Ltd. Suite 530 Bank West Building, 5th Floor 7251 W. Lake Mead Blvd. Las Vegas, NV 89128		EXAMINER FERGUSON, MARISSA L		
		ART UNIT 2854		PAPER NUMBER
DATE MAILED: 08/11/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/782,666	Applicant(s) MCEWAN, THOMAS E.	
	Examiner Marissa L Ferguson	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 24-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Uzzo (US Patent 4,609,905).

Regarding claim 24, Uzzo teaches a structural element configured to secure the tire monitor to or within a vehicle (Column 2, Lines 53-61), a radar transmitter-receiver (20,44,46) located on the structural element, the radar transmitter-receiver configured to generate a radar transmit signal, transmit the radar transmit signal to thereby radiate the radar transmit signal toward a tire (Figure 1), wherein irradiating the tire with the radar transmit signal generates a reflection representative of one or more aspects of the tire (Figure 5 and Column 2, Lines 36-64), receive the reflection and convert the reflection to an electrical signal comprising a reflection signal, a processor (20,44,46) configured to receive and process the reflection signal or a signal representative thereof, wherein the processing comprises comparing the reflection signal to a prior version of the reflection signal or a reflecting signal varies by greater than a threshold signal

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from the prior version of the reflection signal or a baseline signal (Column 2, Lines 36-64 and Column 5, Lines 1-51).

Regarding claim 25, Uzzo teaches a tire monitor is configured (Figure 1) to monitor the tire during rotation of the tire resulting from movement of the vehicle.

Regarding claim 26 Uzzo teaches wherein a radar transmitter receiver comprises a first antenna and a second antenna (24 and 26).

Regarding claim 27, Uzzo teaches a tire comprising a sidewall and a tread, and the radar transmitter receiver is configured to irradiate the sidewall or tread (Figure 2a).

Regarding claim 28, Uzzo teaches wherein the radar transmit signal comprises two or more pulses and the processor is configured to integrate two or more reflections (Column 2, Lines 36-64 and Column 5, Lines 1-51).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29,30,32-36 and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uzzo (US Patent 4,609,905) in view of Niekerk et al. (US Patent 6,463,798).

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Regarding claims 29,33,36,38 and 40, Uzzo teaches a radar transceiver for mounting on a vehicle and configured to transmit one or more RF signals at the vehicle tire (see elements 20,44,46 and Column 2, Lines 53-61), receive one or more reflected echoes of the RF signal (Figure 5 and Column 5, Lines 1-51) from the vehicle tire and a processor (20,44,46) in communication with the radar transceiver configured to process one or more of the reflected echoes. However, he does not explicitly disclose monitoring for a tread or sidewall abnormality such as bulging ,tire run-out,etc.

Niekerk et al. teaches an RF identification system that monitors tire tread abnormality (Column 4, Lines 54-67 and Column 6, Lines 42-47). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention as taught by Uzzo to include a system for monitoring tread abnormality as taught by Niekerk et al., since Niekerk et al. teaches it is advantageous to alert operator of unsafe tread conditions.

Regarding claim 30, Uzzo teaches a radar transceiver and processor (20,44,46) that are mounted on a vehicle (Figure 1).

Regarding claim 32 and 38, Uzzo teaches wherein the tire comprises rubber and wherein the processing comprising comparing the transmitted RF signal to the reflected echoes to monitor for an abnormality (Column 2, Lines 36-67, Column 3, Lines 1-15 and column 5, Lines 1-52).

Regarding claims 34,35 and 39, Uzzo teaches a vehicle control system connected to the processor to control a vehicle system to provide a notification to

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a driver in response to an indication of a tire tread or sidewall abnormality

(Column 5, Lines 1-51).

3. Claims 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uzzo (US Patent 4,609,905) in view of Niekerk et al. (US Patent 6,463,798) as applied to claim 29 above, and further in view of Ehrlich (US Patent 5,764,162).

Uzzo teaches the claimed invention, however he does not explicitly disclose a radar transceiver mounted on a test stand. Ehrlich teaches a radar based detector mounted on fixture posts (14a,14b and Column 3, Lines 43-45).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to additionally modify the invention as taught by Uzzo to include a radar system mounted on a stand as taught by Ehrlich, since Ehrlich teaches it is advantageous to provide a stable foundation for the radar system.

4. Claims 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uzzo (US Patent 4,609,905) in view of Niekerk et al. (US Patent 6,463,798) as applied to claim 36 above, and further in view of Matsumura (US Patent 4,373,161).

Uzzo teaches the claimed invention, however he does not explicitly disclose processing the received RF reflections comprising processing Doppler reflections. Matsumura teaches a Doppler radar structure that processes Doppler reflections (see element 11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to additionally modify the invention as taught by Uzzo to include Doppler reflections as taught by

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Matsumura, since Matsumura teaches a Doppler for the purpose of providing efficient surface reflections.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa L Ferguson whose telephone number is (571) 272-2163. The examiner can normally be reached on (M-T) 6:30am-4:00pm and every other (F) 7:30am-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marissa L Ferguson
Examiner
Art Unit 2854

HLF


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